APPLICANI(S): AVNI, Dov SERIAL NO.:

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AMENDMENTS TO THE CLAIMS

Please amend and add the following claims to read as follows: Claims 1-38 (cancelled)

- (New) An in vivo imaging system comprising: 39. an imager to receive a plurality of input data corresponding to an image;
 - a transmitter to transmit a selection of said input data; a receiver to receive said selection of input data; and a processor to interpolate reconstructed data based on said selection of input data.
- (New) The in vivo imaging system of claim 39, wherein said 40. imager is to produce said selection of said input data.
- (New) The in vivo imaging system of claim 39, comprising a 41. display for viewing a display image corresponding to said selection of input data and said reconstructed data.
- (New) The in vivo imaging system of claim 39 wherein the 42. imager and the transmitter are included in a swallowable capsule.
- (New) A system for reconstructing an image, the system comprising: a controller to:
 - receive selected image data from an in-vivo device; pre-process the selected image data; and interpolate the selected image data to produce reconstructed image data, so that the reconstructed image data includes more
- (New) The system of claim 43, wherein the controller 44. interpolates by a method selected from a group including: interpolation, quadratic interpolation, interpolation, polynomial interpolation, and weighted average interpolation.

data than selected image data.

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interpolation, polynomial interpolation, and weighted average interpolation.

- (New) The system of claim 43, wherein the controller is to 45. produce additional image data resulting in a reconstructed image.
- (New) The system of claim 43 wherein the controller is to post 46. process the interpolated image data.
 - (New) The system of claim 46, wherein the controller is to post process by a method selected from a group including: image sharpening, color suppression, intensity adjustment, convolution and applying a median filter.
- (New) The system of claim 43, wherein the controller is to pre-48. process by a method selected from a group including applying error correction code, reducing noise, gradient evaluation, and detecting edges.
- (New) The system of claim 43, wherein the controller is to 49. generate reconstructed data based on said selected image data
- 50. (New) The system of claim 43 wherein the controller is to receive the selected image data from a swallowable capsule.